

## ACID RAIN IN HAWAI'I\*

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Precipitation samples have been collected for chemical analysis on the island of Hawai'i since June 1975. Though the number of collection sites varied from 5 to 10, the permanent sites included Kapoho (sea level), Hilo (60 m), Kulani Mauka (2500 m), and Mauna Loa Observatory (3400 m). Samples were collected either on an event basis or every three days depending on the accessibility of the site. The pH and conductivity tests were performed immediately after collection of all samples. Anion analysis was made on selected samples using an ion chromatograph. The results show that pH values in precipitation ranged from 3.7 to 5.5 with an all-island average of 4.5. The acidity of the precipitation increased with elevation from sea level to 3400 m. Analysis in terms of air trajectories and surface winds at the Mauna Loa site indicates the more acidic rains come from the northern quadrant. The effects of the volcano on the acidity will also be discussed.